IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants	:	John H. HEALEY and Gene R. DIRESTA
U.S. Serial No.	:	09/890,116
Confirmation No.	:	6037
Filed	:	November 20, 2001
Examiner	:	Donna A. Jagoe
Art Unit	:	1614
For	:	ANTI-RESORPTIVE BONE CEMENTS AND ALLOGENEIC, AUTOGRAFIC, AND XENOGRAFIC BONE GRAFTS

Law Offices of Albert Wai-Kit Chan, PLLC
World Plaza, Suite 604
141-07 20th Avenue
Whitestone, New York 11357

November 9, 2007

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

AMENDMENT IN RESPONSE TO OCTOBER 2, 2007 FINAL OFFICE ACTION

This Amendment is submitted in response to the Final Office Action issued October 2, 2007. A shortened statutory period for reply is set to expire 3 months from the mailing date of the Office Action, i.e. January 2, 2008. Accordingly, this Amendment is being timely filed.

Claim Amendment Fee Calculation

	Claims remaining after amendment		Highest No. Previously Paid	Present Extra	Rate (SMALL Entity)	Additional Fee
Total	6	Minus	84	0	X $25.00	$0.00
Ind.	1	Minus	16	0	X $100.00	$0.00

Amendments to the claims are reflected in the listing of claims which begins on page 3 of this paper.

Remarks begin on page 6 of this paper.

Conclusion begins on page 9 of this paper.

Amendments To The Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-76. (Canceled)

77. (Currently amended) A composition for local drug delivery comprising:

(a) a mixture comprising an anti-resorptive agent having a particle-size distribution which is about the same or less than that of a polymeric bone-cement component to provide for even distribution of the anti-resorptive particles throughout a polymerized bone-cement matrix after polymerization reaction; and

(b) a monomeric bone-cement component,

wherein the polymeric bone-cement component comprising the anti-resorptive agent is uniformly mixed with the monomeric bone-cement component to effect a polymerization reaction to obtain a polymerized bone-cement matrix,

wherein the anti-resorptive agent is present in an amount that does not compromise the bone cement's chemical or mechanical properties,

wherein the amount of anti-resorptive agents added to the polymeric bone-cement component does not weaken the bone-

cement component or polymerized bone-cement matrix, or interfere with polymerization reaction of the bone-cement components, [[and]]

wherein the polymerization of the bone cement components does not chemically interfere with or inactivate the anti-resorptive agents[[.]], and

wherein the bone-cement is polymethylmethacrylate and the anti-resorptive agent is pamidronate or etidronate or a pharmaceutically acceptable salt or ester thereof, and the bone cement comprises about 1% or more by weight of the anti-resorptive agent.

78-88. (Canceled)

89. (Previously presented) The composition of claim 77, wherein 65 to about 70 percent of the polymeric bone-cement particles and the anti-resorptive agents have an average diameter of about 25 microns.

90. (Previously presented) The composition of claim 77, wherein 30 to about 35 percent of the polymeric bone cement particles and the anti-resorptive agents are about 13 to about 17 microns in diameter.

91. (Previously presented) The composition of claim 77, wherein the anti-resorptive agent is present on the outer surface of the polymerized bone-cement matrix, or is uniformly

distributed around the surface of the polymerized bone-cement matrix.

92. (Previously presented) The composition of claim 77, wherein the anti-resorptive agent is impregnated throughout the polymerized bone-cement matrix after polymerization reaction.

93-116. (Canceled)

117. (Previously presented) The composition of claim 77 produced by the steps of: (a) mixing a polymer component with an anti-resorptive amount of an anti-resorptive agent to form a mixture; and (b) adding a liquid monomer component to the mixture.

118-125. (Canceled)

REMARKS

Claim Status

Claims 77-115, 117, and 122-125 are pending in the application. Claim 77 has been amended. Claims 78-88, 93-115, and 122-125 have been canceled without prejudice to Applicants' right to pursue the subject matters in a future application.

Rejection Under 35 U.S.C. §102/103

Claims 77-115, 117, and 122-125 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being unpatentable over WO 96/39107 (Merck Co.) and Sabokbar et al. (Ann. Rheum. Dis. 57:618 (1998)), and further in view of Remington's Pharmaceutical Sciences, 15th Edition, 1975, pages 1569-1570. The rejection is respectfully traversed.

Claim 77 has been amended to recite a composition wherein the bone-cement is polymethylmethacrylate and the anti-resorptive agent is pamidronate or a pharmaceutically acceptable salt or ester thereof, and wherein the anti-resorptive agent is present in an amount that does not compromise the bone cement's chemical or mechanical properties. In the response filed August 7, 2007, Applicants have submitted a declaration containing data that show the composition of the present invention does not compromise the bone cement's mechanical properties, whereas addition of anti-resorptive agent according to WO 96/39107 (Merck Co.) actually compromises the performance of the bone cement.

The Examiner contends that

> The comparison of the bone cement instantly claimed (MSKCC shown in fig. 1) is compared to bone cement without any addition of anti resorptive agents and to "MERCK" wherein 90 mg of pamidronate is mixed with 40 g of Simplex. This would be a 0.225% mixture of bisphosphonate in the bone cement. The Merck reference teaches the amount of bisphosphonate is generally from 0.005 to 10 percent of the total cement composition. Thus, the comparison is for one aspect of the Merck reference, but not for every embodiment. Further, the Declaration refers only to the system described in the above referenced application and not to the individual claims of the application. Thus, there is no showing that the objective evidence of nonobviousness is commensurate in scope with the claims.

In response, Applicants submit that the previously submitted declaration show that mixing 2g of pamidronate with 40g of SIMPLEX (i.e. 5% by weight) according to the present invention does not compromise the bone cement's mechanical strength, whereas adding as little as 0.225% by weight of pamidronate into the bone cement according to the Merck's formulation resulted in significantly decreased bone cement mechanical strength. Moreover, the present specification also show that mixing 0.5, 1, 1.5, or 2g of etidronate disodium or pamidronate disodium per 40g of polymethylmethacrylate (i.e. 1.25% to 5% by weight) does not compromise the bone cement's mechanical strength (*see* Example 1 and Figures 1-2).

Applicants submit that claim 77 has been amended to recite a bone cement comprising about 1% or more by weight of anti-resorptive agent, and the anti-resorptive agent is present in an amount that

does not compromise the bone cement's chemical or mechanical properties. In view of the above remarks, Applicants submit that amended claim 77 is commensurate in scope with the disclosure provided in the specification. In order to expedite the prosecution of the present application, claims 78-88, 93-115, and 122-125 have been canceled without prejudice. Accordingly, Applicants respectfully request that the rejection of claims 77, 89-92, and 117 under 35 U.S.C. §102(b) or 35 U.S.C. §103(a) be withdrawn.

CONCLUSION

Applicants respectfully maintain that all the grounds of rejections raised in the October 2, 2007 Final Office Action have been addressed and earnestly urge the Examiner to render favorable action for the claimed invention.

No fee is deemed necessary in connection with the filing of this Communication. However, if any fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 50-1891. Conversely, authorization is also hereby given to credit the amount of any overpayment to Deposit Account No. 50-1891.

If a telephone interview would be of assistance in advancing the prosecution of the subject application, Applicants' undersigned attorney invites the Examiner to telephone him at the number provided below. If any additional fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 50-1891.

Respectfully submitted,

Albert Wai-Kit Chan

Albert Wai-Kit Chan
Registration No. 36,479
Attorney for Applicant(s)
Law Offices of
Albert Wai-Kit Chan, PLLC
World Plaza, Suite 604
141-07 20th Avenue
Whitestone, New York 11357
Tel: (718) 799-1000
Fax: (718) 357-8615
E-mail: chank@kitchanlaw.com